



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q62422

RECEIVED

APR 13 2004

Yusuke KIMATA et al.

Appln. No.: 09/739,619

Group Art Unit: 2643

Technology Center 2600

Confirmation No.: 4741

Examiner: Melur Ramakrishnaiah

Filed: December 20, 2004

For: PICTURE-PHONE DEVICE PROVIDING MEANS FOR GUIDING OPERATOR'S
LINE OF SIGHT TO SPECIFIC DIRECTION THEREIN

SUBMISSION OF APPELLANTS' BRIEF ON APPEAL

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an original and two copies of Appellants' Brief on Appeal. A check for the statutory fee of \$330.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

Laura Moskowitz
Registration No. 55,470

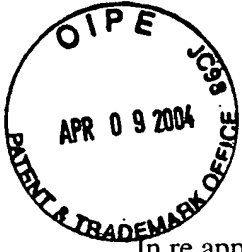
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23373

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Date: April 9, 2004



PATENT APPLICATION

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For: PICTURE-PHONE DEVICE PROVIDING MEANS FOR GUIDING OPERATOR'S
LINE OF SIGHT TO SPECIFIC DIRECTION THEREIN

APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 1.192, Appellants submit the following:

I. REAL PARTY IN INTEREST

The real party in interest is NEC CORPORATION by virtue of an assignment executed by Yusuke Kimata and Shuji Yamaguchi (Appellants, hereinafter) to NEC CORPORATION on January 5, 2001.

II. RELATED APPEALS AND INTERFERENCES

On information and belief, Appellants, the Assignee, and the undersigned submit that there are no other appeals or interferences before the Board of Appeals and Interferences ("the Board") that will directly affect or be affected by the Board's decision in the present Appeal.

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III. STATUS OF CLAIMS

Pending claims 1-21 stand finally rejected. Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Hiroaki, U.S. Patent No. 5,786,846 ("Hiroaki"). Claims 3-9 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hiroaki, in view of Ota, JP 63276352 ("Ota"). Claims 10-11 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hiroaki, in view of Leppisaari, EP 0844905 A2 ("Leppisaari"). Claims 12-15 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hiroaki, in view of Leppisaari and Ota. Claims 16-17 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hiroaki, in view of Kobayashi, JP 356152387A ("Kobayashi"). Claims 18-21 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hiroaki, in view of Kobayashi and Ota. Therefore, claims 1-21 (*see* Appendix) are all the claims on Appeal.

IV. STATUS OF AMENDMENTS

An amendment under 37 C.F.R. § 1.116, filed on August 22, 2002, amended claims 1 and 4-8 and added claims 9-21. Those claim amendments were entered and considered upon the filing of an RCE on September 20, 2002. No further Amendments have been filed. Accordingly, all claim amendments have been entered.

V. SUMMARY OF THE INVENTION

The claimed invention relates to a picture-phone device, enabling two parties to view each other on specialized screens while talking on the telephone.¹ Generally, the invention

¹ See p. 3, Ins. 11-14 of the application.

includes a monitor for displaying an image of one party to the other party (the operator), a camera, for creating an image of the operator, a transceiver, including a microphone and a speaker, and a means for directing the operator's line of sight toward the camera.

One of the goals recognized and attained by Appellants' claimed invention is that of providing a device that helps ensure that the conversing parties appear to be maintaining eye contact while using the picture-phone. In order to create an appearance of eye contact, some conventional picture phone systems provide a camera behind a viewing screen.² In order for the camera behind the screen to record an image of the operator, the screen ceases displaying and becomes transparent for a given increment of time each second. However, this means that during the given increment of time, the operator is unable to see the third party displayed on the screen. This also means that an image of the operator is recorded only during the small increment of time, and therefore, that the image the third party receives of the operator is limited to the few frames of image that are recorded each second while the operator's screen is blank. Finally, in addition to these problems, this invention is both complicated and costly to produce.³

According to the present invention, an image inputting system, such as a camera, is provided on the periphery of an image outputting system, such as a viewing screen, and an operator is guided to look at the camera.⁴ As shown in Figure 1, the operator's line of sight can be guided to the camera by means such as a flashing light 130 provided near the camera, or an

² See Background; Japanese Patent Publication No. Hei 6-217298.

³ See Background.

⁴ Fig. 1; p. 5-6.

arrow 150, displayed on a viewing screen 110, pointing to the off-screen camera.⁵ Both of these guiding means direct the operator to look at the camera while speaking, thereby facilitating eye-contact with the third party who is looking at a screen display of the image recorded by the operator's camera.

According to one exemplary embodiment of the present invention, as illustrated in Figure 2, a picture-phone device also includes a speaker 201, a microphone 202, and a voice processor 203.⁶ The voice processor converts an analog voice signal from the microphone of the operator into a digital signal to be sent to the third party with whom the operator is communicating.⁷ The voice processor also determines whether or not the picture-phone is in use based on a voice signal.⁸

Overall, the methods and apparatuses claimed in the present invention describe a system whereby an operator of a picture-phone is directed to look at a camera in order to create eye contact between the operator and a third party with whom the operator is communicating.

VI. ISSUE

The issues on Appeal are whether or not finally rejected claims 1 and 2 are patentable over Hiroaki under 35 U.S.C. § 102(b); whether or not finally rejected claims 3-9 are patentable over Hiroaki in view of Ota under 35 U.S.C. § 103(a); whether or not finally rejected claims 10-

⁵ Fig. 1; p. 6, lns. 4-7.

⁶ Fig. 2; p.6, lns. 14-17.

⁷ P. 6, ln. 25 - p. 7, ln. 1.

⁸ P. 7, lns. 2-4.

11 are patentable over Hiroaki in view of Leppisaari under 35 U.S.C. § 103(a); whether or not finally rejected claims 12-15 are patentable over Hiroaki in view of Leppisaari and Ota under 35 U.S.C. § 103(a); whether or not finally rejected claims 16-17 are patentable over Hiroaki in view of Kobayashi under 35 U.S.C. § 103(a); and whether or not finally rejected claims 18-21 are patentable over Hiroaki in view of Kobayashi and Ota under 35 U.S.C. § 103(a).

VII. GROUPING OF CLAIMS

Group I includes claims 1, 2, 4-11, 13-17, and 19-21 which all stand or fall together as a group. Group II includes claims 3, 12, and 18, which all stand or fall together as a group, and which recite patentably distinct features from the claims of Group I, as set forth in Section VIII.

VIII. ARGUMENTS

Appellants respectfully request that the members of the Board reverse the rejection of claims 1 and 2 over Hiroaki because Hiroaki fails to disclose or suggest each of the limitations recited by claims 1 and 2. Additionally, Appellants respectfully request that the rejections of claims 3-21 under 35 U.S.C. § 103(a) be reversed for the same reasons as presented herein with respect to claims 1 and 2, and because a reasonable combination, if any, of the cited references fails to teach or suggest all of the claimed limitations.

The claims of Group I are not anticipated by Hiroaki, nor are they obvious over any reasonable combination of Hiroaki, Ota, Leppisaari, and Kobayashi.

Hiroaki. Hiroaki fails to disclose or suggest all of the limitations recited in either of claims 1 or 2, finally rejected over Hiroaki under 35 U.S.C. § 102(b). Hiroaki is directed to a

user (operator) interface of a video communication terminal and to a method for notifying an operator of his deviation from an appropriate shoot range.² Hiroaki discusses that an operator is directed to reposition himself when it has been determined that his body has deviated from the shoot range of a camera.¹⁰

Claim 1, and claims 2-21 by dependency, each require: “means for guiding the operator’s line of sight toward said imaging portion.” As discussed in the specification of the present invention, when an operator’s line of sight is directed to an imaging portion (e.g. a camera) it appears to the party at the other end of the communication that the operator is looking at him and maintaining eye contact.¹¹ Hiroaki fails to disclose or suggest this limitation.

According to the disclosure of Hiroaki, a camera 602 has a defined “shoot range”, information on which is stored in a judgment section 102.¹² The judgment section determines the position of an operator with respect to the shoot range of the camera and sends a signal to a notification section.¹³ If it is determined that the operator is positioned outside, or partially outside of the shoot range, a video image is generated to notify the operator that he is outside of the shoot range and to direct the operator to reposition himself.¹⁴ According to Hiroaki, there are a number of ways that the operator can be notified, including displaying an arrow indicating to

² See Hiroaki, title and abstract.

¹⁰ See Hiroaki, abstract.

¹¹ P. 5, ln. 18- p. 6, ln. 10; p. 18, ln. 23 - p. 19, ln. 3 of the application.

¹² Hiroaki, fig. 6; abstract.

¹³ *Id.*, Abstract; col. 7, lns. 4-8; col. 3, lns. 51-55; col. 7, lns. 41-46; col. 8, lns. 48-50.

¹⁴ *Id.*, Abstract; col. 9, lns. 35-37; col. 3, lns. 55-58; col. 7, lns. 9-13, col. 11, lns. 45-40.

the operator in which direction he should move in order to reposition himself.¹⁵ Once the operator has repositioned himself within the shoot range of the camera, the notification disappears.¹⁶

Contrary to the assertion of the Examiner¹⁷, a notification of whether an operator is within the shoot range of a camera and an indication to guide the operator to move his body into the shoot range does not teach or suggest guiding the operator's line of sight to a camera. In fact, based on the disclosure of Hiroaki, which describes indicators on the screen directing the operator to move his body, it would be natural for the operator to have his line of sight directed to the screen, so that he can identify in which direction he should move. Because Hiroaki fails to teach or suggest guiding the operator's line of sight to a camera, based on the disclosure of Hiroaki, if an operator did direct his gaze to the camera, it would be completely incidental to, and not as a result of anything taught or suggested by Hiroaki.

Further, the Examiner errs in his assertion that Hiroaki discloses a goal of achieving good eye contact.¹⁸ In fact, neither the portion of Hiroaki referred to be the Examiner¹⁹, nor any other portion of Hiroaki discusses eye contact.

¹⁵ *Id.*, Col. 9, ln. 35 - col. 10, ln. 11; col. 1, lns. 1-15; col. 13, lns. 50-57; col. 15, lns. 53-60; col. 26, lns. 13-21; figures 9-15.

¹⁶ *Id.*, Col. 7, lns. 14-15.

¹⁷ Office Action, January 12, 2004, p. 9.

¹⁸ *Id.*, p. 8.

¹⁹ Hiroaki, col. 3, lns. 21-26.

According to common usage, a line of sight is an imaginary line between a viewer's eyes and an object being viewed.²⁰ In the case of the present invention, as recited in claim 1, the line of sight is an imaginary line between the operator's eyes and the imaging portion. In this way, according to claim 1, the operator is directed to look at the camera while the phone conversation is taking place. As discussed, Hiroaki fails to mention eye contact, a line of sight of an operator, or any direction in which an operator looks other than at the screen. As mentioned, according to Hiroaki, the arrows displayed to the operator only indicate a direction in which the operator should move his body in order to place himself within the shoot range of the camera, they do not indicate a direction in which he should look. Accordingly, the device of Hiroaki does not guide "the operator's line of sight toward said imaging portion," as required by claim 1, but rather requires the operator to look at a screen in order to be informed of his position with respect to the shoot range and to be directed to move his body in a certain direction.

Further, contrary to the assertion of the Examiner, moving into the shoot range of the camera, as directed by Hiroaki, does not inherently achieve a line of sight between an operator and the camera, thus establishing eye contact between the operator and a third party at the other end of the communication. The line of sight of the operator is not the same as the physical position of the operator with respect to the shoot range of a camera. An operator could easily be situated within the shoot range of a camera, and yet, not be looking at the camera (i.e. not have

²⁰ See Webster's Third New International Dictionary, Unabridged ("a line from an observer's eye to a distant point [] toward which he is looking or directing an observing instrument"); and American Heritage Dictionary of the English Language: Fourth Edition, 2000 ("an imaginary line from the eye to a perceived object").

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his or her line of sight directed to the camera). Likewise, an operator could be looking at the camera, but not be situated within the shoot range of the camera.

For at least the reasons presented above, Hiroaki fails to disclose or suggest all of the limitations of claim 1, and therefore fails to anticipate the present invention as recited in claim 1 under 35 U.S.C. § 103(a). Further, claim 2 is patentable at least by virtue of its dependence on claim 1.

Ota, Leppisaari, and Kobayashi. A reasonable combination of Hiroaki and any of Ota, Leppisaari, and Kobayashi fails to teach or suggest all of the limitations of the present invention as recited by any of claims 4-11, 13-17, or 19-21. As discussed above, Hiroaki fails to disclose or suggest all of the limitations of the present invention as recited in claim 1, from which each of claims 4-11, 13-17, and 19-21 depend. No combination of any of Ota, Leppisaari, and Kobayashi remedies the above-discussed deficiencies of Hiroaki.

Ota. Ota is generally directed to telephone terminal equipment having automatic retrieving and dialing means.²¹ According to the invention of Ota, an operator speaks the name of a third party to whom the operator wishes to place a call.²² The operator's voice is analyzed and data, such as a phone number, corresponding to the third party is displayed.²³ The operator can then press a "dial-in" key in order to place the call to the third party.²⁴ Ota fails to teach or

²¹ See Ota, abstract.

²² *Id.*

²³ *Id.*

²⁴ *Id.*

suggest any imaging portion, image display portion, or means for guiding an operator's line of sight, as required by claim 1 of the present application. Consequently, Ota does not remedy the failure of Hiroaki to disclose a means for guiding an operator's line of sight, and thus a reasonable combination, if any, of Hiroaki and Ota fails to teach or suggest all of the limitations of claim 1.

Therefore, claims 4-9, rejected under 35 U.S.C. § 103(a) over Hiroaki and Ota, are patentable at least by virtue of their dependence on claim 1.

Leppisaari. Leppisaari is generally directed to a terminal and a method for producing an image of an operator to be transmitted from a terminal.²⁵ According to the disclosure of Leppisaari, a terminal, including a camera and a display screen identifies the figure of an operator within an image field, determines the location of the figure within the image field, and adjusts the image to focus on the image of the operator or to center the image of the operator within the image field.²⁶ Like Hiroaki, an embodiment of Leppisaari discloses that if it is determined that the operator is not centered within the image field, the operator may be directed by arrows or lights on the terminal.²⁷ However, according to Leppisaari, rather than arrows or lights directing the operator to reposition himself, as in Hiroaki, the operator is instead directed

²⁵ See Leppisaari, title; abstract.

²⁶ *Id.* Fig. 3; p. 2, lns. 48-56.

²⁷ *Id.* p. 3, lns. 13-17.

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to move a handheld terminal containing the camera, thereby functionally repositioning the image field around his figure.²⁸

Still, Leppisaari, like Hiroaki and Ota, fails to teach or suggest means for guiding an operator's line of sight, as required by claim 1. As described with respect to Hiroaki, directing an operator to reposition himself within a shoot range, or inversely, directing an operator to reposition a camera in order to place himself within an image field, as disclosed by Leppisaari, does not teach or suggest guiding an operator's line of sight toward an imaging portion, as required by claim 1.

Consequently, Leppisaari fails to remedy the failure of Hiroaki to disclose a means for guiding a operator's line of sight, and a reasonable combination, if any, of Hiroaki and Leppisaari fails to teach or suggest all of the limitations of claim 1.

Thus, claims 10-11, rejected under 35 U.S.C. § 103(a) over Hiroaki and Leppisaari are patentable at least by virtue of their dependence on claim 1. Further, because neither Leppisaari nor Ota remedies the deficiencies of Hiroaki, claims 13-15, rejected under 35 U.S.C. § 103(a) over Hiroaki, Leppisaari, and Ota, are also patentable at least by virtue of their dependence on claim 1.

Kobayashi. Kobayashi is generally directed to a video telephone device having a lens with a hole in it and a display screen positioned within the hole in the lens.²⁹ A camera is located

²⁸ *Id.*

²⁹ *See* Kobayashi, abstract.

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at a position on the back side of the screen, and the lens and the camera are positioned so that an image of an operator is focused by the lens onto the camera.³⁰ However, Kobayashi, like Hiroaki, Ota, and Leppisaari, fails to teach or suggest a means for guiding an operator's line of sight toward an imaging portion, as required by claim 1. According to Kobayashi, there is no direction to the operator to guide his line of sight, and in fact, as the camera is positioned on the back side of the display screen, it would be impossible for an operator to see the camera if seated in front of the display screen.

Consequently, Kobayashi fails to remedy the failure of Hiroaki to disclose a means for guiding a operator's line of sight, and therefore a reasonable combination, if any, of Hiroaki and Kobayashi fails to teach or suggest all of the limitations of claim 1.

Thus, claims 16-17, rejected under 35 U.S.C. § 103(a) over Hiroaki and Kobayashi are patentable at least by virtue of their dependence on claim 1. Further, because neither Kobayashi nor Ota remedies the deficiencies of Hiroaki, claims 19-21, rejected under 35 U.S.C. § 103(a) over Hiroaki, Kobayashi, and Ota, are also patentable at least by virtue of their dependence on claim 1.

Claims 3, 12, and 18 of Group II are patentable over any combination of Hiroaki, Ota, Leppisaari, and Kobayashi.

Claims 3, 12, and 18 are patentable at least by virtue of their dependence on claim 1, in light of the arguments presented above, and for the following additional reasons.

³⁰ See *Id.*

A reasonable combination, if any, of Hiroaki and Ota and either Leppisaari or Kobayashi fails to teach or suggest all of the limitations of the present invention as recited in any of claims 3, 12, and 18. Each of claims 3, 12, and 18 require a determination of whether a picture-phone is in use based on a voice input signal from a microphone. The Examiner acknowledges that Hiroaki fails to teach or disclose this limitation and relies on Ota.³¹

As discussed above, Ota discloses a telephone terminal which can recognize the name of a third party spoken by an operator and, in response, display information about the third party. However, Ota fails to teach or suggest any ability of the telephone terminal to determine whether the telephone terminal is in use, according to a voice input signal. Consequently, a reasonable combination, if any, of Hiroaki and Ota fails to disclose or suggest all of the limitations of the present invention as recited in any of claims 3, 12, and 18.

Further, neither Leppisaari, nor Kobayashi disclose any type of voice input signal or any determination of whether a picture-phone is in use.

Therefore, each of claims 3, 12, and 18 are patentable over Hiroaki and Ota and either Leppisaari or Kobayashi, under 35 U.S.C. § 103(a).

Conclusion

For at least the reasons contained in this Brief, Appellants respectfully request that the Board reverse the Examiner's final rejections of claims 1 and 2 under 35 U.S.C. § 102(b) and of claims 3-21 under 35 U.S.C. § 103(a).

³¹ Office Action, January 12, 2004, p. 3.

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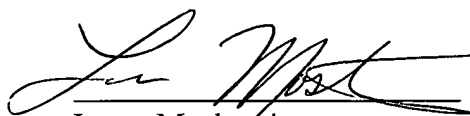
U.S. Application No. 09/739,619

Q62422

The present Brief on Appeal is being filed in triplicate. Unless a check is submitted herewith for the fee required under 37 C.F.R. §1.192(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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23373

CUSTOMER NUMBER

Date: April 9, 2004

APPENDIX

CLAIMS 1-21 ON APPEAL:

1. A picture-phone device for an operator to exchange images and voices with the party on the other end via a communication circuit comprising:

an imaging portion,

an image display portion, and

means for guiding the operator's line of sight toward said imaging portion.

2. The picture-phone device claimed in claim 1, wherein means for guiding the operator's line of sight comprises:

indicating means for giving indications to the operator for guiding the operator's line of sight.

3. The picture-phone device claimed in claim 2, further comprising:

control means for controlling indicating means in response to a result of whether the picture-phone is in use or not according to a voice input signal output from a microphone.

4. The picture-phone device claimed in claim 3, wherein said indicating means is a light flashing system for guiding the operator's line of sight by light emission.

5. The picture-phone device claimed in claim 4, wherein the light flashing system is provided near the imaging portion.

6. The picture-phone device claimed in claim 2, wherein said indicating means is a caption outputting system for projecting a special visual image in order to guide the operator's line of sight.

7. The picture-phone device claimed in claim 6, wherein the special visual image is an arrow for pointing to the imaging portion.

8. The picture-phone device claimed in claim 6, wherein the special visual image is a variation of characters, patterns or backgrounds in order to guide the operator's line of sight toward the imaging portion.

9. The picture phone device claimed in claim 1, the imaging display portion comprising:

an inner display field, and

an outer frame portion.

10. The picture-phone device claimed in claim 9, wherein the imaging portion is disposed with respect to the outer frame portion.

11. The picture-phone device claimed in claim 10, wherein means for guiding the operator's line of sight comprises:

indicating means for giving indications to the operator for guiding the operator's line of sight.

12. The picture-phone device claimed in claim 11, further comprising:

control means for controlling said indicating means in response to a result of whether the picture-phone is in use or not according to a voice input signal output from a microphone.

13. The picture-phone device claimed in claim 12, wherein said indicating means is a light flashing system for guiding the operator's line of sight by light emission.

14. The picture-phone device claimed in claim 12, wherein said indicating means is a caption outputting system for projecting a special visual image in order to guide the operator's line of sight.

15. The picture phone device claimed in claim 14, wherein the special visual image is one of the following: an arrow, a variation of characters, patterns or backgrounds in order to guide the operator's line of sight.

16. The picture-phone device claimed in claim 9, wherein the imaging portion is disposed behind the inner display field.

17. The picture-phone device claimed in claim 16, wherein means for guiding the operator's line of sight comprises:

indicating means for giving indications to the operator for guiding the operator's line of sight.

18. The picture-phone device claimed in claim 17, further comprising:

control means for controlling said indicating means in response to a result of whether the picture-phone is in use or not according to a voice input signal output from a microphone.

19. The picture-phone device claimed in claim 18, wherein said indicating means is a light flashing system for guiding the operator's line of sight by light emission.

20. The picture-phone device claimed in claim 18, wherein said indicating means is a caption outputting system for projecting a special visual image in order to guide the operator's line of sight.

21. The picture phone device claimed in claim 20, wherein the special visual image is one of the following: an arrow, a variation of characters, patterns or backgrounds in order to guide the operator's line of sight.